

**DECODING DEVICE, ENCODING DEVICE, INTERPOLATION FRAME CREATING  
SYSTEM, INTEGRATED CIRCUIT DEVICE, DECODING PROGRAM, AND  
ENCODING PROGRAM**

**ABSTRACT OF THE DISCLOSURE**

An object of the present invention is to provide a decoding device, an encoding device, an interpolation frame creating system, an integrated circuit device, a decoding program and an encoding program for creating interpolation frames at a high precision with an encoding efficiency being improved. The decoding device (12) includes a decoding section (70), a motion vector detection section (79), and an interpolation frame creation section (80). The decoding section (70) decodes an encoded image signal (d211) which is obtained by encoding image frames which form an image signal (d210) and additional information (d231) for creating an interpolation frame which interpolates the image frames based on a motion vector (MV48) which is a motion vector between the image frames. The motion vector detection section (79) detects a motion vector (MV90) which is a motion vector between decoded image frames (d260). The interpolation frame creation section (80) creates an interpolation frame based on the motion vector (MV90), the decoded image frame (d259), and the decoded additional information (d252).